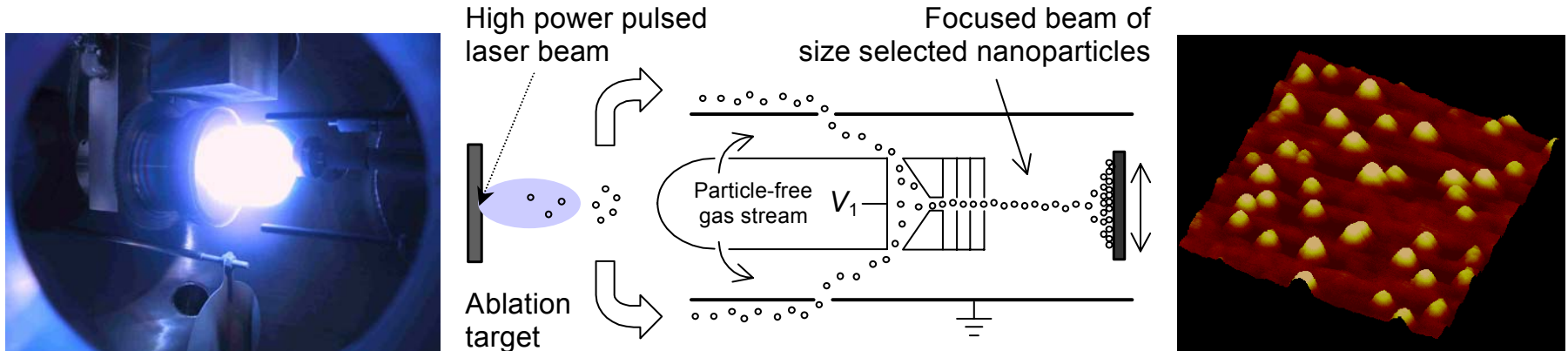


Development of a Multi-Purpose Laser Deposition Facility for Research and Education in Nanostructured Materials

Renato P. Camata, University of Alabama at Birmingham

DMR-0116098



A New Materials Fabrication

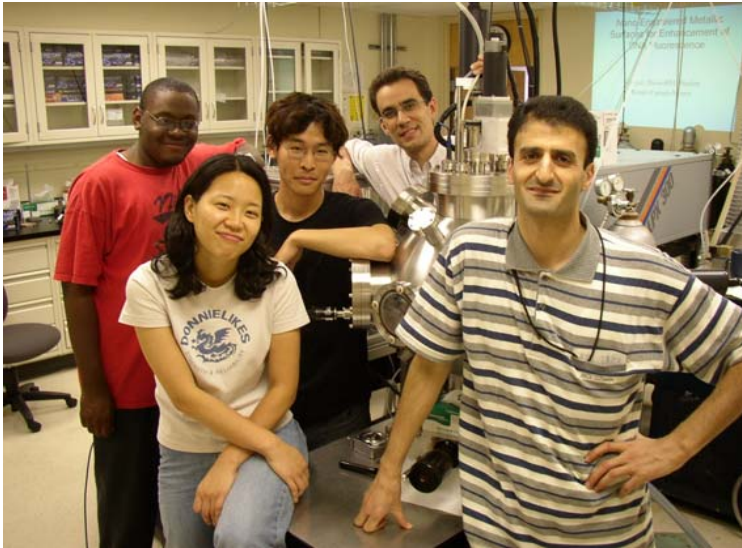
Technique. This award enabled the development of a technique known as *Nanoparticle Beam Pulsed Laser Deposition*. Nanoparticles produced by a laser in the form of an aerosol

are size-selected and deposited onto a substrate. This deposition may be done simultaneously to different matrix materials to create new nanostructured composites that are difficult to obtain by other methods.

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Education. The instrumentation funded by this award has become the main fabrication facility in the thesis research of 6 graduate students. It has also been used in materials research by 6 undergraduate students (4 of them from our NSF-funded REU program: DMR-9987872), 1 teacher, and 1 high school student.



Student users (left to right): Gregory Davis (REU 2003), Hyunbin Kim (MS), Masashi Matsumura (PhD), Renato Camata (PI), and Mevlut Bulut (PhD).



Undergraduate student Andreece Richardson (REU 2002) explains her research using this facility to high school student John Harrison.